

1. A structure for vertically housing multiple computer systems, the structure comprising:

a bottom support member;

a plurality of bottom guides mounted to the bottom support member;

a top support member substantially parallel to the bottom support member and attached to
5 the bottom support member by two side members;

a plurality of top guides mounted to the top support member, wherein the top guides are
substantially parallel to the bottom guides and are substantially aligned with the
bottom guides, wherein a computer system having a top groove and a bottom
groove slides into a computer space in between the top support member and the
bottom support member by having the top groove align with a top guide and by
10 having the bottom groove align with a bottom guide to provide a fitting
relationship wherein the computer system slides into the computer space to a non-
backplaned rear.

- 15 2. The structure as defined in claim 1 further comprising a plurality of integrated semi-locking
mechanisms.

3. The structure as defined in claim 2 wherein each bottom guide includes an indentation to mate
with a projection of the bottom groove to achieve an integrated semi-locking mechanism.

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4. The structure as defined in claim 1 wherein the non-backplaned rear is substantially open to
allow access to the computer systems.

5. The structure as defined in claim 1 wherein there are five bottom guides and five top guides to
25 provide five guide pairs.

6. The structure as defined in claim 5 including five computer systems removably slid into the
structure wherein each computer system slides along a guide pair.

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7. A structure for housing nodes of a cluster in a distributed computer system, the structure comprising:

a bottom support member;

a plurality of bottom guides mounted to the bottom support member;

5 a top support member substantially parallel to the bottom support member and attached to the bottom support member by two side members;

a plurality of top guides mounted to the top support member, wherein the top guides are substantially parallel to the bottom guides and are substantially aligned with the bottom guides, wherein a node having a top groove and a bottom groove slides
10 into a node space in between the top support member and the bottom support member by having the top groove align with a top guide and by having the bottom groove align with a bottom guide to provide a fitting relationship wherein the node slides into the node space to a non-backplaned rear.

15 8. The structure as defined in claim 7 further comprising a plurality of integrated semi-locking mechanisms.

9. The structure as defined in claim 8 wherein each bottom guide includes an indentation to mate with a projection of the bottom groove to achieve an integrated semi-locking mechanism.
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10. The structure as defined in claim 7 wherein the non-backplaned rear is substantially open to allow access to the nodes.

11. The structure as defined in claim 7 wherein there are five bottom guides and five top guides
25 to provide five guide pairs.

12. The structure as defined in claim 11 including five nodes removably slid into the structure wherein each node slides along a guide pair.

13. A structure for housing nodes of a cluster in a distributed computer system, the structure comprising:

- a bottom support member;
- a plurality of bottom guides mounted to the bottom support member;
- 5 a first side member connected to the bottom support member;
- a second side member connected to the bottom support member;
- a top support member substantially parallel to the bottom support member and connected to the first side member and to the second side member thereby defining a substantially rectangular node space between the top support member and the bottom support member and between the first side member and the second side member;
- 10 a plurality of top guides mounted to the top support member, wherein the top guides are substantially parallel to the bottom guides and are substantially aligned with the bottom guides, wherein a node having a top groove and a bottom groove slides into the node space by having the top groove align with a top guide and by having the bottom groove align with a bottom guide to provide a fitting relationship wherein the node slides into the node space in a vertical orientation to a non-backplaned rear.
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20 14. The structure as defined in claim 13 further comprising a plurality of integrated semi-locking mechanisms.

15. The structure as defined in claim 14 wherein each bottom guide includes an indentation to mate with a projection of the bottom groove to achieve an integrated semi-locking mechanism.

25 16. The structure as defined in claim 13 wherein the non-backplaned rear is substantially open to allow access to the nodes.

17. The structure as defined in claim 13 wherein there are five bottom guides and five top guides to provide five guide pairs.

18. The structure as defined in claim 17 including five nodes removably slid into the structure
5 wherein each node slides along a guide pair.

19. A computer system for vertical placement in a computer system structure, the computer system comprising:

a processor;

5 a communications component in electronic communication with the processor for electronic communications;

a non-backplaned communications port in electronic communications with the communications component for electronic communications;

memory in electronic communication with the processor for storing data;

a housing for the processor, the communications component and the memory, the housing

10 being substantially rectangular, the housing including a top, a bottom and a rear, the top including a top groove and the bottom including a bottom groove, the top and bottom grooves being substantially parallel and aligned whereby the computer system may be vertically placed into the computer system structure by sliding the computer system along a pair of guides of the computer system structure aligned
15 with the grooves of the housing whereby the computer system slides back to the rear such that the non-backplaned communications port is accessible.

20. The computer system as defined in claim 19 wherein the housing is substantially enclosed.

20 21. The computer system as defined in claim 19 wherein the bottom groove includes a projection to mate with an indentation of the computer system structure.

22. A node for vertical placement in a node structure, the node comprising:

a processor;

a communications component in electronic communication with the processor for electronic communications;

5 a non-backplaned communications port in electronic communications with the communications component for electronic communications;

memory in electronic communication with the processor for storing data;

a housing for the processor, the communications component and the memory, the housing

10 being substantially rectangular, the housing including a top, a bottom and a rear, the top including a top groove and the bottom including a bottom groove, the top and bottom grooves being substantially parallel and aligned whereby the node may be vertically placed into the node structure by sliding the node along a pair of guides of the node structure aligned with the grooves of the housing whereby the node slides back to the rear such that the non-backplaned communications port
15 is accessible.

23. The node as defined in claim 22 wherein the housing is substantially enclosed.

24. The node as defined in claim 22 wherein the bottom groove includes a projection to mate
20 with an indentation of the node structure.